Engineering Interpretations

Water Management

Interpretations of soils for water management are given as limitations for pond reservoir areas; embankments, dikes, and levees; excavated pond (aquifer-fed); and as restrictive features that affect drainage, irrigation, terraces and diversions, and grassed waterways.

POND RESERVOIR AREA is the area that holds water behind a dam or embankment. Soils best suited to this use have a low seepage potential, which is determined by the permeability and depth to fractured or permeable bedrock, or other permeable material.

EMBANKMENTS, DIKES, AND LEVEES are raised structures of soil material constructed to impound water or protect land against overflow. They generally are less than 20 feet high and are constructed of "homogeneous" soil material (without a core zone) and compacted to medium density.

EXCAVATED PONDS (AQUIFER-FED) are bodies of water created by excavating a pit or dugout into a ground-water aquifer. Excluded are ponds which are fed by surface runoff or that have embankments that impound water 3 feet or more above the original surface.

DRAINAGE is the process of removing excess surface and subsurface water from agricultural land. Soil features are listed that affect grading, excavation, and stability of trench sides or ditch banks. Features are also listed which might affect productivity after drainage is installed. The availability of drainage outlets must also be considered.

IRRIGATION is the controlled application of water to supplement rainfall for supporting plant growth. Soil features are listed that affect design, layout, construction, management, or performance of an irrigation system.

TERRACES AND DIVERSIONS are embankments or a combination of an embankment and a channel constructed across a slope to control erosion by diverting or storing surface runoff instead of permitting it to flow uninterrupted down the slope. Soil features are listed that affect the construction of terraces and diversions and that may cause problems after construction.

GRASSED WATERWAYS are natural or constructed channels that generally are broad and shallow and are covered with erosion-resistant grasses. They are used to conduct surface water to outlets at a nonerosive velocity. Soil features are listed that affect the construction and maintenance of the waterway, and also that affect the growth of grass after construction.

This subsection includes:

• (a) Water Management

Water Management

Map symbol and soil name			Drainage		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value 	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
2D: Goss	 Limited ~slope (limited) ~seepage (moderately limited)	0.99	 Very limited ~slope (very limited) ~large stones (limited	ĺ	 Very limited ~slope (very limited) ~erodes easily (moderately limited) ~large stones (slightly limited)	 0.60	 Very limited ~large stones (very limited) ~slope (limited) ~erodes easily (moderately limited)	 0.99 0.60	 Very limited ~large stones (very limited) ~slope (limited) ~erodes easily (moderately limited)	 1.00 0.99 0.60
2F: Goss	 Very limited ~slope (very limited) ~seepage (moderately limited)	 1.00 0.50 	 Very limited ~slope (very limited) ~large stones (limited	 1.00 0.99 	 Very limited ~slope (very limited) ~droughty (slightly limited) ~large stones (slightly limited)	ĺ	 Very limited ~slope (very limited) ~large stones (very limited)	 1.00 1.00 	 Very limited ~slope (very limited) ~large stones (very limited) ~droughty (slightly limited)	 1.00 1.00 0.30
3: Twomile	 Moderately limited ~seepage (moderately limited) 	 0.50 	 Slightly limited ~percs slowly (slightly limited) 	 0.26 	 Moderately limited ~erodes easily (moderately limited) ~percs slowly (slightly limited)	 0.60 0.26	 Moderately limited ~erodes easily (moderately limited) ~wetness (moderately limited)	0.60	Moderately limited ~erodes easily (moderately limited) ~wetness (moderately limited)	0.60
5C2: Bucklick	Moderately limited ~seepage (moderately limited) ~slope (moderately limited) ~depth to bedrock (moderately limited)	0.45	 Very limited ~slope (very limited) 	 1.00 	 Very limited ~slope (very limited) ~erodes easily (moderately limited) ~slow intake (moderately limited)	 1.00 0.60 0.60	 Moderately limited ~erodes easily (moderately limited) ~slope (moderately limited) ~depth to bedrock (slightly limited)	 0.60 0.45 0.12	Moderately limited -erodes easily (moderately limited) -slope (moderately limited) -depth to bedrock (moderately limited)	0.45

Water Management

Map symbol and soil name	Pond reservoir are	as	 Drainage 		 Irrigation 		Terraces and divers	ions	Grassed waterway	rs
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
5D2: Bucklick	Limited ~slope (limited) ~seepage (moderately limited) ~depth to bedrock (moderately limited)	0.99	 Very limited ~slope (very limited) 	1.00	 Very limited ~slope (very limited) ~erodes easily (moderately limited) ~slow intake (moderately limited)	1.00	Limited ~slope (limited) ~erodes easily (moderately limited) ~depth to bedrock (slightly limited)	0.99	Limited ~slope (limited) ~erodes easily (moderately limited) ~depth to bedrock (moderately limited)	0.35
5E2: Bucklick	Very limited ~slope (very limited) ~seepage (moderately limited) ~depth to bedrock (moderately limited)	0.50	 Very limited ~slope (very limited) 	1.00	 Very limited ~slope (very limited) ~erodes easily (moderately limited) ~slow intake (moderately limited)	 1.00 0.60 0.60	 Very limited ~slope (very limited) ~erodes easily (moderately limited) ~depth to bedrock (moderately limited)	 1.00 0.60 0.39	 Very limited ~slope (very limited) ~erodes easily (moderately limited) ~depth to bedrock (moderately limited)	0.50
6C2: Crider	Moderately limited ~seepage (moderately limited) ~slope (moderately limited)	 0.50 0.45	 Very limited ~slope (very limited)	1.00	 Very limited ~slope (very limited)	 1.00 	 Moderately limited ~slope (moderately limited) 	 0.45 	 Moderately limited ~slope (moderately limited)	0.45
6D2: Crider	Limited -slope (limited) -seepage (moderately limited)	 0.99 0.50	 Very limited ~slope (very limited)	1.00	 Very limited ~slope (very limited)	 1.00 	 Limited ~slope (limited)	 0.99 	 Limited ~slope (limited)	0.99
6E: Crider	 Very limited ~slope (very limited) ~seepage (moderately limited)	 1.00 0.50	 Very limited ~slope (very limited) 	1.00	 Very limited ~slope (very limited) 	 1.00 	 Very limited ~slope (very limited) 	 1.00 	 Very limited ~slope (very limited)	1.00

Water Management

Map symbol and Pond reservoir a soil name		as	 Drainage 		 Irrigation 		 Terraces and divers 	ions	Grassed waterways		
	Rating class and limiting features	Value 	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value 	Rating class and limiting features	Value	
7B: Menfro	 Moderately limited ~seepage (moderately limited) ~slope (slightly limited)	 0.50 0.10	 Moderately limited ~slope (moderately limited) 		 Moderately limited ~erodes easily (moderately limited) ~slope (moderately limited)	0.40	 Moderately limited ~erodes easily (moderately limited) ~slope (slightly limited)	0.60	 Moderately limited ~erodes easily (moderately limited) ~slope (slightly limited)	 0.60 0.10	
7C2: Menfro	Moderately limited ~seepage (moderately limited) ~slope (moderately limited)	0.45	 Very limited ~slope (very limited) 	 1.00 	 Very limited ~slope (very limited) ~erodes easily (moderately limited)	 1.00 0.60	 Moderately limited ~erodes easily (moderately limited) ~slope (moderately limited)	 0.60 0.45	 Moderately limited ~erodes easily (moderately limited) ~slope (moderately limited)	0.45	
7D2: Menfro	 Limited ~slope (limited) ~seepage (moderately limited)	 0.99 0.50	 Very limited ~slope (very limited) 	 1.00 	 Very limited ~slope (very limited) ~erodes easily (moderately limited)	 1.00 0.60	 Limited ~slope (limited) ~erodes easily (moderately limited)	 0.99 0.60	Limited <pre>~slope (limited) ~erodes easily (moderately limited)</pre>	0.99	
7E2: Menfro	 Very limited ~slope (very limited) ~seepage (moderately limited)	 1.00 0.50	 Very limited ~slope (very limited) 	 1.00 	 Very limited ~slope (very limited) ~erodes easily (moderately limited)	 1.00 0.60	 Very limited ~slope (very limited) ~erodes easily (moderately limited)	 1.00 0.60	 Very limited ~slope (very limited) ~erodes easily (moderately limited)	1.00	
7F: Menfro	 Very limited ~slope (very limited) ~seepage (moderately limited)	 1.00 0.50	 Very limited ~slope (very limited) 	 1.00 	 very limited ~slope (very limited) ~erodes easily (moderately limited)	 1.00 0.60	 Very limited ~slope (very limited) ~erodes easily (moderately limited)	 1.00 0.60	 Very limited ~slope (very limited) ~erodes easily (moderately limited)	1.00	

Water Management

Map symbol and soil name	Pond reservoir area	as	 Drainage		 Irrigation 		Terraces and divers	ions	 Grassed waterway 	rs
	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
10F: Gasconade	 Very limited ~bedrock <20 in. (very limited) ~slope (very limited)	 1.00 1.00	Very limited ~slope (very limited) ~shallow to bedrock (very limited) ~percs slowly (very limited)		Very limited ~shallow to bedrock (very limited) ~percs slowly (very limited) ~droughty (very limited)	 1.00 1.00 1.00	Very limited ~depth to bedrock (very limited) ~large stones (very limited) ~slope (very limited)	 1.00 1.00 1.00	 Very limited ~large stones (very limited) ~bedrock <20 in. (very limited) ~droughty (very limited)	 1.00 1.00
Rock outcrop	 Not rated 	 	 Not rated 	 	 Not rated 		 Not rated 	 	 Not rated 	
12: Kennebec	 Moderately limited ~seepage (moderately limited)	 0.50	 Moderately limited ~flooding (moderately limited)	 0.60	 Moderately limited ~flooding (moderately limited)	 0.60	Not limited		 Not limited	
16D2: Minnith	 Limited ~slope (limited) ~seepage (moderately limited)	 0.99 0.32 	 Very limited ~slope (very limited) ~percs slowly (slightly limited)	ĺ	 Very limited ~slope (very limited) ~erodes easily (moderately limited) ~percs slowly (slightly limited)	 1.00 0.60 0.13	 Limited ~slope (limited) ~erodes easily (moderately limited)	 0.99 0.60 	Limited ~slope (limited) ~erodes easily (moderately limited)	 0.99 0.60
17F: Ramsey	 Very limited ~bedrock <20 in. (very limited) ~slope (very limited)	 1.00 1.00	 Very limited ~slope (very limited) ~shallow to bedrock (very limited) ~percs slowly (moderately limited)	 1.00 0.39	 Very limited ~shallow to bedrock (very limited) ~droughty (very limited) ~slope (very limited)	 1.00 1.00 1.00	 very limited -depth to bedrock (very limited) ~slope (very limited)	1.00	 Very limited ~bedrock <20 in. (very limited) ~droughty (very limited) ~slope (very limited)	 1.00 1.00 1.00

Water Management

Map symbol and soil name	Pond reservoir area	as	Drainage 		Irrigation 		Terraces and divers	ions	Grassed waterways	
	Rating class and limiting features	Value	Rating class and limiting features	Value 	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
17F: (cont) Minnith	 Very limited ~slope (very limited) ~seepage (moderately limited)	1.00	 very limited ~slope (very limited) ~percs slowly (slightly limited)	1.00	(very limited)	 1.00 0.60 0.13	 Very limited ~slope (very limited) ~erodes easily (moderately limited)	1.00	 Very limited ~slope (very limited) ~erodes easily (moderately limited)	1.00
Rock outcrop	 Not rated 	 	 Not rated 		 Not rated 	 	 Not rated 		 Not rated 	
22F: Goss	 Very limited ~slope (very limited) ~seepage (moderately limited)	 1.00 0.50	 Very limited ~slope (very limited) ~large stones (limited	 1.00 0.99 	 Very limited ~slope (very limited) ~droughty (moderately limited) ~large stones (slightly limited)	 1.00 0.38 0.14	 very limited ~slope (very limited) ~large stones (very limited)	1.00	Very limited ~slope (very limited) ~large stones (very limited) ~droughty (moderately limited)	1.00
Gasconade	 Very limited ~bedrock <20 in. (very limited) ~slope (very limited)	1.00	 Very limited ~slope (very limited) ~shallow to bedrock (very limited) ~percs slowly (very limited)	 1.00 1.00 1.00	 Very limited ~shallow to bedrock (very limited) ~percs slowly (very limited) ~droughty (very limited)	 1.00 1.00 1.00	 Very limited ~depth to bedrock (very limited) ~large stones (very limited) ~slope (very limited)	1.00	 Very limited ~large stones (very limited) ~bedrock <20 in. (very limited) ~droughty (very limited)	 1.00 1.00 1.00
Brussels	Very limited ~slope (very limited)	 1.00 	 Very limited ~slope (very limited) ~large stones (very limited) ~percs slowly (slightly limited)	 1.00 1.00 0.13	 Very limited ~slope (very limited) ~large stones (very limited) ~droughty (very limited)	 1.00 1.00 1.00	 Very limited ~large stones (very limited) ~slope (very limited)	 1.00 1.00	Very limited ~large stones (very limited) ~slope (very limited) ~droughty (very limited)	 1.00 1.00

Water Management

Map symbol and soil name	Pond reservoir area	as	 Drainage 		Irrigation		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value 	Rating class and limiting features	Value 	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
24C2: Keswick	 	 0.45 	 very limited ~slope (very limited) -percs slowly (moderately limited) 	ĺ	 very limited ~slope (very limited) ~erodes easily (moderately limited) ~percs slowly (moderately limited)	 1.00 0.60 0.39	Moderately limited ~erodes easily (moderately limited) ~slope (moderately limited) ~wetness (moderately limited)	 0.60 0.45 0.44	 Moderately limited ~erodes easily (moderately limited) ~slope (moderately limited) ~wetness (moderately limited)	0.60
24D2: Keswick	 Limited ~slope (limited)	 0.99 	 Very limited ~slope (very limited) ~percs slowly (moderately limited)	 1.00 0.39 	 Very limited ~slope (very limited) ~erodes easily (moderately limited) ~percs slowly (moderately limited)	 0.60 0.39	Limited ~slope (limited) ~erodes easily (moderately limited) ~wetness (moderately limited)	 0.99 0.60 0.44	Limited ~slope (limited) ~erodes easily (moderately limited) ~wetness (moderately limited)	 0.99 0.60 0.44
31B: Hatton	 Slightly limited ~slope (slightly limited)	 0.10 	 Very limited ~percs slowly (very limited) ~slope (moderately limited)	ĺ	 Very limited ~percs slowly (very limited) ~erodes easily (moderately limited) ~slope (moderately limited)	 1.00 0.60 0.40	Moderately limited -erodes easily (moderately limited) -wetness (slightly limited) -slope (slightly limited)	0.60	 Moderately limited ~erodes easily (moderately limited) ~wetness (slightly limited) ~slope (slightly limited)	 0.60 0.28 0.10
31C: Hatton	 Moderately limited ~slope (moderately limited)	 0.45 	 very limited ~percs slowly (very limited) ~slope (very limited)	ĺ	 Very limited ~percs slowly (very limited) ~slope (very limited) ~erodes easily (moderately limited)	 1.00 1.00 0.60	Moderately limited -erodes easily (moderately limited) -slope (moderately limited) -wetness (slightly limited)	 0.60 0.45 0.28	Moderately limited -erodes easily (moderately limited) -slope (moderately limited) -wetness (slightly limited)	 0.60 0.45 0.28

Water Management

Map symbol and soil name	Pond reservoir areas		 Drainage 		 Irrigation 		Terraces and diversions		Grassed waterways	
	Rating class and limiting features	Value 	Rating class and limiting features	Value 	Rating class and limiting features	Value 	Rating class and limiting features	Value 	Rating class and limiting features	Value
33: Haymond	 Moderately limited ~seepage (moderately limited)	 0.50 	 Moderately limited ~flooding (moderately limited) 		 Moderately limited ~flooding (moderately limited) ~erodes easily (moderately limited)	0.60	 Moderately limited ~erodes easily (moderately limited)	0.60	 Moderately limited ~erodes easily (moderately limited)	 0.60
34F: Brevator	 Very limited ~slope (very limited)	 1.00 	 Very limited ~slope (very limited) ~percs slowly (slightly limited)	İ	 Very limited ~slope (very limited) ~percs slowly (slightly limited)	 1.00 0.13	 Very limited ~slope (very limited) 	 1.00 	 Very limited ~slope (very limited) 	 1.00
35B: Mexico	 Not limited 		 Very limited ~percs slowly (very limited) ~slope (slightly limited)	ĺ	 Very limited ~percs slowly (very limited) ~erodes easily (moderately limited) ~slope (slightly limited)	 1.00 0.60 0.10	 Moderately limited ~erodes easily (moderately limited) ~wetness (moderately limited)	 0.60 0.53 	 Moderately limited ~erodes easily (moderately limited) ~wetness (moderately limited)	 0.60 0.53
36: Putnam	 Not limited 	 	 Very limited ~percs slowly (very limited)	 1.00 	 Very limited ~percs slowly (very limited) ~erodes easily (moderately limited)	 1.00 0.60	Limited -wetness (limited) -erodes easily (moderately limited)	 0.99 0.60	Limited -wetness (limited) -erodes easily (moderately limited)	 0.99 0.60
40: Moniteau	 Not limited 	 	 Slightly limited ~percs slowly (slightly limited) 	0.13	 Moderately limited ~erodes easily (moderately limited) ~percs slowly (slightly limited)	İ	 Very limited ~wetness (very limited) ~erodes easily (moderately limited)	 1.00 0.60	Very limited -wetness (very limited) -erodes easily (moderately limited)	 1.00 0.60

Water Management

Map symbol and soil name	Pond reservoir areas		 Drainage 		 Irrigation 		 Terraces and diversions 		 Grassed waterways 	
	Rating class and limiting features	Value 	Rating class and limiting features	Value 	Rating class and limiting features	Value 	Rating class and limiting features	Value 	Rating class and limiting features	Value
43: Cedargap	 Very limited ~seepage (very limited)	1.00	Limited ~flooding (limited) ~large stones (slightly limited	0.90	 Limited ~flooding (limited) 	 0.90 	 Slightly limited ~large stones (slightly limited)	 0.21 	 Slightly limited ~large stones (slightly limited)	 0.21
44: Dameron	 Very limited ~seepage (very limited)	1.00	Moderately limited ~flooding (moderately limited) ~large stones (slightly limited		 Moderately limited ~flooding (moderately limited) 	 0.60 	Not limited	 	Not limited	
48C: Weller	 Moderately limited ~slope (moderately limited)	0.30	 Limited ~slope (limited) ~percs slowly (moderately limited)	 0.98 0.39 	 Limited ~slope (limited) ~erodes easily (moderately limited) ~percs slowly (moderately limited)	0.98	 Moderately limited ~erodes easily (moderately limited) ~slope (moderately limited)	 0.60 0.30	 Moderately limited ~erodes easily (moderately limited) ~slope (moderately limited)	 0.60 0.30
61E: Crider	 Very limited ~slope (very limited) ~seepage (moderately limited)	1.00	 Very limited ~slope (very limited)	 1.00 	 Very limited ~slope (very limited) 	 1.00 	 Very limited ~slope (very limited)	 1.00 	 Very limited ~slope (very limited)	 1.00
71D: Menfro	 Limited ~slope (limited) ~seepage (moderately limited)	0.80	 Very limited ~slope (very limited) 	 1.00 	 Very limited ~slope (very limited) ~erodes easily (moderately limited)	 1.00 0.60	Limited ~slope (limited) ~erodes easily (moderately limited)	0.80	Limited <pre> ~slope (limited) ~erodes easily (moderately limited)</pre>	 0.80 0.60

Water Management

Map symbol and soil name	Pond reservoir are	as	Drainage 		Irrigation 		Terraces and divers 	ions	Grassed waterway	rs
	Rating class and limiting features	Value 	Rating class and limiting features	Value 	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
79: Dupo	 Moderately limited ~seepage (moderately limited)	0.50	 Moderately limited ~percs slowly (moderately limited) 	0.39	 Moderately limited ~erodes easily (moderately limited) ~percs slowly (moderately limited)	0.60	 Moderately limited ~erodes easily (moderately limited) ~wetness (slightly limited)	0.60	 Moderately limited ~erodes easily (moderately limited) ~wetness (slightly limited)	0.60
80: Portage	 Not limited 		 Very limited ~percs slowly (very limited) 	 1.00 	 Very limited ~percs slowly (very limited) ~slow intake (limited) ~erodes easily (moderately limited)	 1.00 0.99 0.60	 Very limited ~wetness (very limited) ~erodes easily (moderately limited)	 1.00 0.60	 Very limited ~wetness (very limited) ~erodes easily (moderately limited)	 1.00 0.60
82: Dockery	 Moderately limited ~seepage (moderately limited)	0.50	 Limited ~flooding (limited) 	 0.90 	 Limited ~flooding (limited) ~erodes easily (moderately limited) ~slow intake (moderately limited)	0.90	 Moderately limited ~erodes easily (moderately limited) ~wetness (moderately limited)	0.60	 Moderately limited ~erodes easily (moderately limited) ~wetness (moderately limited)	0.36
85: Carlow	Not limited		 Very limited ~percs slowly (very limited) 	 1.00 	 Very limited ~percs slowly (very limited) ~erodes easily (moderately limited)	 1.00 0.60	 Very limited ~wetness (very limited) ~erodes easily (moderately limited)	 1.00 0.60	 Very limited ~wetness (very limited) ~erodes easily (moderately limited)	 1.00 0.60
86: Kampville	 Not limited 	 	 Slightly limited ~percs slowly (slightly limited) 	 0.26 	 Moderately limited ~erodes easily (moderately limited) ~percs slowly (slightly limited)	 0.60 0.26	 Moderately limited ~erodes easily (moderately limited) ~wetness (moderately limited)	0.44	 Moderately limited ~erodes easily (moderately limited) ~wetness (moderately limited)	0.44

Water Management

Map symbol and soil name	Pond reservoir areas		 Drainage	Drainage		 Irrigation 		Terraces and diversions		/s
	Rating class and limiting features	Value	Rating class and limiting features	Value 	Rating class and limiting features	Value	Rating class and limiting features	Value	Rating class and limiting features	Value
91: Pits	 Not rated 		 Not rated	 	 Not rated 		 Not rated 		 Not rated 	
M-W: Water	 Not rated 		Not rated	 	 Not rated		Not rated		Not rated	
W: Water	 Not rated 		 Not rated 	 	 Not rated 		 Not rated 		 Not rated 	